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# CANCER FACTS

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National Cancer Institute • National Institutes of Health

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## Questions and Answers About Cigar Smoking and Cancer

### 1. What are the health risks associated with cigar smoking?

Scientific evidence has shown that cancers of the oral cavity (lip, tongue, mouth, and throat), larynx, lung, and esophagus are associated with cigar smoking. Furthermore, evidence strongly suggests a link between cigar smoking and cancer of the pancreas. In addition, daily cigar smokers, particularly those who inhale, are at increased risk for developing heart and lung disease.

Like cigarette smoking, the risks from cigar smoking increase with increased exposure. For example, compared with someone who has never smoked, smoking only one to two cigars per day doubles the risk for oral and esophageal cancers. Smoking three to four cigars daily can increase the risk of oral cancers to more than eight times the risk for a nonsmoker, while the chance of esophageal cancer is increased to four times the risk for someone who has never smoked. Both cigar and cigarette smokers have similar levels of risk for oral, throat, and esophageal cancers.

The health risks associated with occasional cigar smoking (less than daily) are not known. About three-quarters of cigar smokers are occasional smokers.

### 2. What is the effect of inhalation on disease risk?

One of the major differences between cigar and cigarette smoking is the degree of inhalation. Almost all cigarette smokers report inhaling while the majority of cigar smokers do not because cigar smoke is generally more irritating. However, cigar smokers who have a history of cigarette smoking are more likely to inhale cigar smoke. Cigar smokers experience higher rates of lung cancer, coronary heart disease, and chronic obstructive lung disease than nonsmokers, but not as high as the rates for cigarette smokers. These lower rates for cigar smokers are probably related to reduced inhalation.

### 3. How are cigars and cigarettes different?

Cigars and cigarettes differ in both size and the type of tobacco used. Cigarettes are generally more uniform in size and contain less than 1 gram of tobacco each. Cigars, on the other hand, can vary in size and shape and can measure more than 7 inches in length.

Large cigars typically contain between 5 and 17 grams of tobacco. It is not unusual for some premium cigars to contain the tobacco equivalent of an entire pack of cigarettes. U.S. cigarettes are made from different blends of tobaccos, whereas most cigars are composed primarily of a single type of tobacco (air-cured or dried burley tobacco). Large cigars can take between 1 and 2 hours to smoke, whereas most cigarettes on the U.S. market take less than 10 minutes to smoke.

**4. How are the health risks associated with cigar smoking different from those associated with smoking cigarettes?**

Health risks associated with both cigars and cigarettes are strongly linked to the degree of smoke exposure. Since smoke from cigars and cigarettes are composed of many of the same toxic and carcinogenic (cancer causing) compounds, the differences in health risks appear to be related to differences in daily use and level of inhalation.

Most cigarette smokers smoke every day and inhale. In contrast, as many as three-quarters of cigar smokers smoke only occasionally, and the majority do not inhale.

All cigar and cigarette smokers, whether or not they inhale, directly expose the lips, mouth, tongue, throat, and larynx to smoke and its carcinogens. Holding an unlit cigar between the lips also exposes these areas to carcinogens. In addition, when saliva containing smoke constituents is swallowed, the esophagus is exposed to carcinogens. These exposures probably account for the fact that oral and esophageal cancer risks are similar among cigar smokers and cigarette smokers.

Cancer of the larynx occurs at lower rates among cigar smokers who do not inhale than among cigarette smokers. Lung cancer risk among daily cigar smokers who do not inhale is double that of nonsmokers, but significantly less than the risk for cigarette smokers. However, the lung cancer risk from moderately inhaling smoke from five cigars a day is comparable to the risk from smoking up to one pack of cigarettes a day.

**5. What are the hazards for nonsmokers exposed to cigar smoke?**

Environmental tobacco smoke (ETS), also known as secondhand or passive smoke, is the smoke released from a lit cigar or cigarette. The ETS from cigars and cigarettes contains many of the same toxins and irritants (such as carbon monoxide, nicotine, hydrogen cyanide, and ammonia), as well as a number of known carcinogens (such as benzene, nitrosamines, vinyl chloride, arsenic, and hydrocarbons). Because cigars contain greater amounts of tobacco than cigarettes, they produce greater amounts of ETS.

There are, however, some differences between cigar and cigarette smoke due to the different ways cigars and cigarettes are made. Cigars go through a long aging and fermentation process. During the fermentation process, high concentrations of carcinogenic compounds are produced. These compounds are released when a cigar is

smoked. Also, cigar wrappers are less porous than cigarette wrappers. The nonporous cigar wrapper makes the burning of cigar tobacco less complete than cigarette tobacco. As a result, compared with cigarette smoke, the concentrations of toxins and irritants are higher in cigar smoke.

In addition, the larger size of most cigars (more tobacco) and longer smoking time produces higher exposures to nonsmokers of many toxic compounds (including carbon monoxide, hydrocarbons, ammonia, cadmium, and other substances) than a cigarette. For example, measurements of the carbon monoxide (CO) concentration at a cigar party and a cigar banquet in a restaurant showed indoor CO levels comparable to those measured on a crowded California freeway. Such exposures could place nonsmoking workers attending such events at significantly increased risk for cancer as well as heart and lung diseases.

## **6. Are cigars addictive?**

Nicotine is the agent in tobacco that is capable of causing addiction or dependence. Cigarettes have an average total nicotine content of about 8.4 milligrams, while many popular brands of cigars will contain between 100 and 200 milligrams, or as many as 444 milligrams of nicotine.

As with cigarette smoking, when cigar smokers inhale, nicotine is absorbed rapidly. However, because of the composition of cigar smoke and the tendency of cigar smokers not to inhale, the nicotine is absorbed predominantly through the lining of the mouth rather than in the lung. It is important to note that nicotine absorbed through the lining of the mouth is capable of forming a powerful addiction, as demonstrated by the large number of people addicted to smokeless tobacco. Both inhaled and noninhaled nicotine can be addictive. The infrequent use by the average cigar smoker, low number of cigars smoked per day, and lower rates of inhalation compared with cigarette smokers have led some to suggest that cigar smokers may be less likely to be dependent than cigarette smokers.

Addiction studies of cigarettes and spit tobacco show that addiction to nicotine occurs almost exclusively during adolescence and young adulthood when young people begin using these tobacco products. Also, several studies raise the concern that use of cigars may predispose individuals to the use of cigarettes. A recent survey showed that the relapse rate of former cigarette smokers who smoked cigars was twice as great as the relapse rate of former cigarette smokers who did not smoke cigars. The study also observed that cigar smokers were more than twice as likely to take up cigarette smoking for the first time than people who never smoked cigars.

## **7. What are the benefits of quitting?**

There are many health benefits to quitting cigar smoking. The likelihood of developing cancer decreases. Also, when someone quits, an improvement in health is seen almost immediately. For example, blood pressure, pulse rate, and breathing patterns start

returning to normal soon after quitting. People who quit will also see an improvement in their overall quality of life. People who decide to quit have many options available to them. Some people choose to quit all at once. Other options gaining popularity in this country are nicotine replacement products, such as patches, gum, and nasal sprays. If considering quitting, ask your doctor to recommend a plan that could best suit you and your lifestyle.

**8. What are the current trends in cigar smoking?**

Although cigar smoking occurs primarily among males between the ages of 35 and 64 who have higher educational backgrounds and incomes, recent studies suggest new trends. Most new cigar users today are teenagers and young adult males (ages 18 to 24) who smoke occasionally (less than daily). According to two large statewide studies conducted among California adults in 1990 and 1996, cigar use has increased nearly five times among women and appears to be increasing among adolescent females as well. Furthermore, a number of studies have reported high rates of use among not only teens but preteens. Cigar use among older males (age 65 and older), however, has continued to decline since 1992.

**9. How are current trends in cigar smoking different from past decades?**

Total cigar consumption declined by about 66 percent from 1973 until 1993. Cigar use has increased more than 50 percent since 1993. The increase in cigar use in the early 1990s coincided with an increase in promotional media activities for cigars.

**10. What additional information is available about the effects of cigar smoking?**

The 1998 NCI monograph *Cigars: Health Effects and Trends* can be ordered from the Cancer Information Service (see below). U.S. residents can order the monograph online at <http://publications.nci.nih.gov> on the Internet. (The monograph can also be viewed and downloaded from this Web site.)

Additional information on the health effects of tobacco is available from the CDC's Tobacco Information and Prevention Source (TIPS) at <http://www.cdc.gov/tobacco> on the Internet. This program collects and distributes reports and news about tobacco, lists services available for people trying to quit using tobacco products, and produces publications about tobacco and the dangers of its use.

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**Sources of National Cancer Institute Information**

**Cancer Information Service**

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

**NCI Online*****Internet***

Use <http://www.cancer.gov> to reach NCI's Web site.

***CancerMail Service***

To obtain a contents list, send e-mail to [cancermail@icicc.nci.nih.gov](mailto:cancermail@icicc.nci.nih.gov) with the word "help" in the body of the message.

**CancerFax®** fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

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